

LITWINISZYN, J., prof., dr.,inz.; KOCHMAŃSKI, T., prof.,dr.,inz.

A discussion on the article "Development of problematics of the influence of mining operations on the movements of rocks of the earth crust " by Jerzy Litwiniszyn. Przegl gorn 18 no.2:138'62.

LITWINISZYN, Jerzy, prof. dr. inż.

On some linear and nonlinear models of subsidence troughs
in loose rocks. Przegl gorn 18 no.5:251-258 My '62.

LITWINISZYN, Jerzy

On certain solutions of the Smoluchowski equation. *Archiw mech* 14
no.3/4:391-399 '62.

1. Department of Mechanics of Continuous Media, Institute of Basic
Technical Problems, Polish Academy of Sciences, Warsaw.

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S/044/63/000/001/017/053
A060/A000

AUTHOR: Litwiniszyn, J.

TITLE: A solution of the Smoluchowski equation and the possibility of its applications in mechanics of stochastic media. I.

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1963, 52, abstract 1B244 (Bull. Acad. polon. sci. Sér. sci. techn., 1961, v. 9, no. 5, 291 - 296; English; summary in Russian)

TEXT: It is noted that certain problems of the mechanics of continuous media lead to seeking the function $\Psi(x, t, \xi, \tau)$ satisfying the Smoluchowski equation

$$\Psi(x, t; \xi, \tau) = \int_{-\infty}^{\infty} \Psi(x, t; \bar{x}, \bar{t}) \Psi(\bar{x}; \bar{t}; \xi, \tau) d\bar{x}.$$

The author considers the homogeneous case: $\Psi(x, t; y, \tau) = \theta(y - x; \tau - t)$. Then by means of the Fourier transform it is demonstrated that the solutions of

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A solution of the Smoluchowski equation and

that equation are the functions

$$\theta(x, t) = (2\pi)^{-1} \int_{-\infty}^{\infty} \exp[-f(\xi)t] \cos \xi x d\xi,$$

where the functions $f(x)$ satisfy the conditions

$$f(x) \geq 0, \quad f(x) = f(-x), \quad \int_{-\infty}^{\infty} \exp[-f(x)t] dx < \infty.$$

Of particular interest is the finding of the solutions $\theta(x, t)$ for which the conditions

$$\lim_{\tau \rightarrow t} \int_{-\infty}^{\infty} w(x, t) \theta(\xi - x, \tau - t) dx = w(\xi, t).$$

are satisfied. In order to find some of these solutions, the author assumes that

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A solution of the Smoluchowski equation and

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$$\theta(\rho, \lambda) = \lambda \varphi(\rho \lambda) \left[\int_{-\infty}^{\infty} \varphi(s) ds \right]^{-1}.$$

It is proven that then the finding of the functions $\varphi(s)$ reduces to the solution of Fredholm's integral equation of the first order. By using this approach it is shown that in the case of $f(x) = x^2$.

$$\theta(\rho, 2t^{1/2}) = 1/2 (\pi t)^{-1/2} \exp \left[-\frac{\rho^2}{4t} \right].$$

By taking $f(x) = |x|$ we obtain $\theta(\rho, t^{-1}) = \frac{1}{\pi} \frac{1}{t} \frac{t^2}{t^2 + \rho^2}.$

A.N. Shirayev

[Abstracter's note: Complete translation]

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LITWINISZYN, Jerzy, prof.

Activities of the Laboratory of Rocks Mechanics. Nauka polska 10
no.5:75-81 8-0 '62.

1. Członek rzeczywisty Polskiej Akademii Nauk, Kierownik Zakładu
Mechaniki Górotworu, Krakow.

LITWINISZYN, J.; SMOLARSKI, A.Z.

A contribution to mechanics of quasi-stochastic bodies. Bul Ac
Pol tech 10 no.6:[309]-[313] '62.

1. Laboratory of Rheology, Department of Mechanics of Continuous
Media, Institute of Fundamental Technical Problems, Polish
Academy of Sciences, Warsaw. Presented by J.Litwiniszyn.

LITWINISZYN, J.

The expected value of the coordinates of the subsidence trough
in a granular body. Bul Ac Pol tech 10 no.11:661-665 '62.

1. Laboratory of Rheology, Institute of Fundamental Technical Problems,
Polish Academy of Sciences, Warsaw.

BODZIONY, J.; LITWINISZYN, J.

Mathematical approach to the phenomenon of colmatage of an
n-fractional suspension of particles. Bul Ac Pol tech 10
no.1:[43]-[49] '62.

1. Laboratory of Rheology, Institute of Fundamental Technical
Problems, Polish Academy of Sciences, Warsaw. Presented by J.
Litwiniszyn.

LITWINISZYN, Jerzy, prof.

Work of the Strata Mechanics Research Establishment. Review Pol
Academy 7 no.4:49-53 O-D '62.

1. Head, Strata Mechanics Research Center, Krakow, Al. Mickiewicza
30. Corresponding member of the Polish Academy of Sciences.

LITWINISZYN, J.; LIN Ci-tong; MACZYNSKI, J.

Filtration due to the action of wind during waste or storage
heap fires. Archiw gorn 8 no. 2:95-109 '63.

LITWINISZYN, J.

On a certain problem of diffusion with simultaneous linear
accumultaion. Bul. Ac. Pol. tech. 11 no.5:225-229 '63.

1. Laboratory of Rheology, Institute of Fundamental Technical
Problems, Polish Academy of Sciences, Warsaw.

LITWINISZYN, J.; LIU CI-TONG

The phenomenon of segregation of grains of a loose medium when shaped in the form of a rotational half-cone. Bul. Ac. Pol. tech. 11 no.5:245-251 '63.

1. Laboratory of Rheology, Institute of Fundamental Technical Problems, Polish Academy of Sciences, Warsaw. Presented by J. Litwiniszyn.

LITWINISZYN, J., prof. dr inż.

A discussion. Przegl gorn 20 [i.e.19] no.9:372 S'63.

1. Przewodniczacy V Sekcji Komitetu Gornictwa Polskiej
Akademii Nauk.

LITWINISZYN, J.

Colmatage considered as a certain stochastic process. Bul Ac
Pol tech 11 no.3:117-122 '63.

1. Laboratory of Rheology, Institute of Fundamental Technical
Problems, Polish Academy of Sciences, Warsaw.

LITWINISZYN, J.

The model of a random walk of particles adapted to research on problems of mechanics of loose media. Bul Ac Pol tech 11 no.10:593-602 '63.

1. Laboratory of Rheology, Institute of Fundamental Technical Problems, Polish Academy of Sciences.

LITWINISZYN, J.

The model of a random walk of particles adapted to research in problems of mechanics of loose media. Pt. 2. Bul Ac Pol tech 12 no.5:341-346 '64.

1. Laboratory of Rheology, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

LITWINISZYN, J.

Contribution to the probabilistic interpretation of fluid flow in a porous medium. Pol Ac Pol tech 12 no.8:591-599 '64.

1. Laboratory of Rheology in Krakow of the Institute of Basic Technical Problems of the Polish Academy of Sciences.

LITWINISZYN, J.; SMOLARSKI, A.Z.

Smoluchowski's system of equations and its application in mechanics of loose media. Bul Ac Pol tech 12 no.8:601-607 '64.

1. Laboratory of Rheology in Krakow of the Institute of Basic Technical Problems of the Polish Academy of Sciences.

LITWINOWICZ, A.

Justified causes of claims against quality in the footwear industry.

p. 110
Vol. 10, no. 5, May 1955
PRZEGLAD SKORZANY
Lodz

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 2
Feb. 1956

LITWINOWICZ, Anna, mgr

New wool fabrics for the summer season 1963 as compared
to trends in the French industry. Przegl wlokien 17 no.
4/5: Supplement: Biul centr biur wzorn przem lekk 4
no. 3/4: 1-4 Ap-My '63.

LITWINOWICZ, Anna

Finnish decorative fabrics. Przegl włókien 18 no.10:Suppl:
Biul CBW przem lek 5 no.9/10:1-4 0 '64.

LITWINOWICZ, J.

"Meat supply of Western Europe.", p. 330, (GOSPODARSTWO WIESNA, Vol. 6, No. 11, Nov. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

LITWINOWICZ, J.

"Internal Secretory Glands, an Important Export Article", p. 26,
(GOSPODARKA MIESNA, Vol. 7, No. 1, Jan. 1955, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4,
No. 5, May 1955, Uncl.

LITWINOWICZ, J.

Increase in the world meat trade. p. 26.

GOSPODARKA MIESNA. (Polskie Wydawnictwa Gospodarcze) Warszawa.
Vol. 8, no. 2, Feb. 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress,
Vol. 5, no. 7, July 1956.

LITWINOWICZ, J.

Prospects of the production and export of bacon in 1956. p. 17.
GOSPODARKA MIESNA. Warszawa Vol. 8, no. 4, Apr. 1956

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

LITWINOWICZ, J.

The current bacon problems in the Netherlands. p. 12. (Gospodarka Miesna, Vol. 8, No. 6, June 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

LITWINOWICZ, J.

Putting in order the meat industry in Turkey. p. 32. (Gospodarka Miesna, Vol. 8, No. 11, Nov 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

LITWINOWICZ, J.

Concerning the adjustment of the meat industry to the growing tasks of export. p.21

GOSPODARKA MIESNA (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland.
Vol. 10, no. 12, Dec. 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959
Uncl.

LITWINOWICZ, J.

The development of the export of meat and its principal markets. (to be cont.) p. 23

GOSPODARKA MIESNA (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland.
Vol. 11, no. 5, May 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, Sept 1959
Uncl.

LITWINOWICZ, J.

The development of the export of meat and its principal markets. (to be cont.) p. 17

GOSPODARKA MIESNA (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland.
Vol. 11, no. 6, June 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, Sept 1959
Uncl.

LITWINDWICZ, J.

The development of the export of meat and the characteristics of principal markets.

GOSPODARKA MIESNA. (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland
Vol. 11, No. 7/8 July/Aug. 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 9, no.1, Jan. 1960

Uncl.

LITWINOWICZ, J.

The development of the export of meat from Poland and the characteristics of principal markets. p. 23.

GOSPODARKA MIESNA. (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland
Vol. 11, no. 9, Sept. 1959.

Monthly List of East European Accessions. (EEIA) LC. Vol. 9, no. 1,
Jan. 1960

Uncl.

LITWINOWICZ, J.

The European common market and its importance for Poland's meat export. p.5.

GOSPODARKA MIESNA. (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland
Vol.11, no. 11, Nov. 1959

Monthly List of East European Accessions. (EEIA) LC. Vol.9, no.1, Jan. 1960

Uncl.

LITWINISZYN, J.

A certain generalization of the Smoluchowski equation. Bul Ac Pol
Tech 8 no.10:575-578 '60.

1. Department of Mechanics of Continuous Media, Institute of Basic
Technical Problems, Polish Academy of Sciences.

LITWINISZYN, J.

A solution of the Smoluchowski equation and the possibility of its applications in mechanics of stochastic media. II. Bul Ac Pol tech 9 no.6:343-346 '61.

1. Research Centre for the Mechanics of Rock Masses, Polish Academy of Sciences.

LITWINOWICZ, Jaroslav (Wroclaw)

History of export and meat industry. Pt. 6. Gosp miesna 14 no. 2;
24-25 F '62.

LITWINOWICZ, Jaroslaw (Warszawa)

History of the meat export and industry. Pt. 7. Gosp
miesna 14 no.4:18-19 Ap '62.

LITWINOWICZ, W.

Services of commercial aviation. p. 11.

PRZEGLAD TECHNICZNY. (Maszynowa Organizacja Techniczna) Warszawa, Poland.
Vol. 80, no. 22, June 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 7, July 1959.

Uncl.

LITWINOWICZ, W.

The future of helicopters in Poland.p. 14.

PRZEGLAD TECHNICZNY. Naczelna Organizacja Techniczna. Warszawa, Poland, Vol. 80,
no. 28, July, 1959.
Uncl.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September, 1959.
Uncl.

LITWINOWICZ, Wacław, mgr.inż.

Trends in aviation (r where are we flying to? Przegl techn 81
no.11:14-15 Mr '67.

LITWINOWICZ, Wacław

The demand for air transportation of goods is growing.
Przeł. techn. no. 42:6-7 19 0 '60.

LITWINOWICZ, Wacław, mgr inż.

Air transportation of goods. Przegl techn 85 no.34:1, 3
23 Ag'64.

LITWINSKI, T.

"Analysis of the 1st (2d) Parachute Championship in Poland. Spadochroniarz",
p. 17, (SKRZYDLATA POLSKA, Vol. 10, No. 48, Nov. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5,
May 1955, Uncl.

LITWINSKI, T.

"Analysis of the 1st (2nd) Parachute Championship in Poland". (Conclusion)
Spadochroniarz. p. 24, (SKRZYDLATA POLSKA, Vol. 10, No. 51, Dec. 1954,
Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4, No. 5,
May 1955, Uncl.

LITWINSKI, T.

More about jumps in winter. p. 12,. (SKRZYDLATA POLSKA, Warszawa, Vol. 11, No. 4, Jan. 1955)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, June 1955,
Uncl.

MALYSZEWICZ, Julianna; LITWONOWICZ, Anna

Modern fabrics with square designs. Przegl włokien 18 no.12:
Suppl:Biul CBW przem lek 5 no.11/12:1-4 D '64.

POLOZ, K.; KOSOVSKAYA, A., tekhnik; VENGEROV, A.; SHEUDITIS, E.;
KAZLAUSKAS, V., prepodavatel'; ATKOCHAYTIS, Ye. [Atkocaitis, E.],
rabotnik; SUPRUNENKO, A.; LITYAGIN, A., starshiy inzh.;
KOSHELEV, V.

Exchange of news and experience. Izobr.i rats. no.3:28-29
Mr '62. (MIRA 15:2)

1. Zamestitel' nachal'nika proizvodstvenno-tekhnicheskogo
otdeleniya steklotarnogo zavoda, g.Kerch' (for Poloz). 2. Make-
yevskiy koksokhimicheskiy zavod, g.Makeyevka (for Kosovskaya).
3. Predsedatel' revizionnoy komissii soveta Vsesoyuznogo obsh-
chestva izobretateley i ratsionalizatorov Zyryanovskogo svint-
sovogo kombinata, Vostochno-Kazakhstanakaya obl. (for Vengerov).
4. Chlen Litovskogo respublikanskogo soveta Vsesoyuznogo ob-
shchestva izobretateley i ratsionalizatorov (for Sheuditis).
5. Vecherniy institut tekhnicheskogo tvorchestva, g.Kaunas (for
Kazlauskas). 6. Vil'nyusskiy molochnyy kombinat (for Atkochaytis).
7. Sekretar' rayonnogo soveta Vsesoyuznogo obshchestva izobretateley
i ratsionalizatorov Kiyevskogo otdeleniya Yugo-Zapadnoy zheleznoy
dorogi, (for Suprunenko). 8. Oblastnoy sovet Vsesoyuznogo ob-
shchestva izobretateley i ratsionalizatorov g. Tula (for Lityagin).
9. Sekretar' krayevogo soveta Vsesoyuznogo obshchestva izobretateley
i ratsionalizatorov, g. Krasnodar (for Koshelev).

(Technological innovations)

OBNORSKIY, V.; LITYAGIN, A.; YASTREBOV, G., slesar' (Chirchik); MANOYLENKO, L.

This is the way we are living. Izobr.i rats. no.5 (201):28-29
'63. (MIRA 16:7)

1. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Vsesoyuznogo gosudarstvennogo proyektnogo instituta stroitel'stva elektrostantsiy (for Obnorskiy). 2. Starshiy inzh. Tul'skogo oblastnogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Lityagin). 3. Chlen Soyuza zhurnalistov SSR for Yastrebov). 4. Predsedatel' Soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Rubezhanskogo khimicheskogo zavoda (for Manoylenko).

(Technological innovations)

ACC NR	AN6016713	(N)	SOURCE CODE: UR/9008/66/000/131/0004/0004
AUTHOR: <u>Sil'vestrov, M.</u> (Candidate of technical sciences); <u>Lityagin, V.</u> (Engineer)			
ORG: none			
TITLE: Problems of spacecraft rendezvous and docking			
SOURCE: Krasnaya zvezda, 08 Jun 66, p. 4, col. 1-4			
TOPIC TAGS: spacecraft docking, space station, spacecraft rendezvous, spacecraft tracking, spacecraft control, space food, spacecraft carried equipment, spacecraft maneuver			
ABSTRACT: According to Candidate of Technical Sciences M. Sil'vestrov and Engineer V. Lityagin, a space station must first be built on Earth, then disassembled, the parts put into a predetermined orbit, and then reassembled in space. Specialists feel that this can be accomplished, but it requires the organization of a complex ground tracking system and well-timed launching of reliably guided transport satellites and rockets. Topping the current list of problems to be solved is that of orbital rendezvous and docking. The first Soviet attempt at this was carried out in 1962 by A. Nikolayev and P. Popovich in the <u>Vostok-3</u> and <u>Vostok-4</u> spacecraft. The minimum distance between these two craft was about 5 km, and the inclination of their orbital planes did not coincide by only 2 minutes.			
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ACC NR: AN6016713

The control of a vehicle's movement during flight is achieved by the use of special engines which serve to accelerate or decelerate the spacecraft as well as to counter disturbing forces. The main problem of a docking in space is the proper positioning of the vehicles during the last 300—500 meters of their approach, and the precise, "soft" coupling of the vehicles. This will be facilitated by on-board instrumentation. Maneuvering techniques are currently the greatest problem; however, there is no doubt that techniques for maneuvering in orbit will shortly become routine.

Biologists have estimated that approximately 275 kg of supplies monthly will be necessary to maintain a crew in a space station. In addition, fuel reserves for stabilizing a station in a certain attitude will be necessary. Specialists estimate that a total of 1275 kg of cargo will have to be delivered into orbit. If the station is to remain in orbit for several months or even years, its crew members will need to be relieved and additional equipment will have to be delivered to the station. The authors predict that the time will come when the assembly of a space station, the refuelling of a rocket in orbit, or the performing of other operations in space will become no more difficult than the refuelling of an aircraft in midair. [ATD PRESS: 5022-F]

SUB CODE: 22, 06 / SUBM DATE: none

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L 21012-66 EWT(m)/T/EWP(t)/EWA(h) IJP(o) JD

ACCESSION NR: APS018741

UR/0020/65/163/002/0326/0328

AUTHOR: Vereshchagin, L. F. (Corresponding member AN SSSR); Kabalkina, S. S.;
Lityagina, L. M.

TITLE: Investigation of the influence of high pressure on the structure of tin oxide

SOURCE: AN SSSR. Doklady, v. 163, no. 2, 1965, 326-328

TOPIC TAGS: pressure effect, tin compound, crystal lattice structure, phase transition

ABSTRACT: An x-ray investigation of the structure of SnO was made at room temperature and pressures up to 100 kbar. A special x-ray camera (DAN v. 151, no. 5, 1068, 1963; J. Jamieson and A. W. Lawson, J. Appl. Phys. v. 33, no. 3, 776, 1962) with molybdenum radiation was used, the main part of which was a pellet made of amorphous boron and a channel for the sample. The pressure could be determined accurate to ± 5 kbar. The results show that at high pressures SnO experiences a reversible phase transition. In most cases this transition occurs at 40--50 kbar, although in some experiments it was observed at 15--20 kbar. The unit cell parameters of the high-pressure phase are $a = 3.42 \pm 0.02 \text{ \AA}$ and $c = 5.62 \pm 0.04 \text{ \AA}$. A sudden change in volume of $7.0 \pm 5\%$ was observed during the phase transition (at

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ACCESSION NR: AP5018741

40 kbar). The two phases differ from each other in the order of arrangement of the crystal layers and the arrangement of the nearest neighbors of the tin atoms. The results show also that the phase transition is reconstructive, in that the Sn...O bond in the low-pressure phase is destroyed during the transition and a new bond is produced. It is suggested in analogy with earlier data by others that at higher pressures SnO will experience a polymorphic transition from a wurtzite structure to a NaCl structure. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut fiziki vysokikh davleniy Akademii nauk SSSR (Institute of High Pressure Physics, AN SSSR)

SUBMITTED: 06Apr65

ENCL: 00

SUB CODE: SS

NR REF SOV: 001

OTHER: 007

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LIT'YAK, I. G.

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acetic titration. These diagrams show the resulting titration curves. It became clear that complex compounds of the type $\text{SnCl}_4 \cdot \text{COOH}_2\text{Sn}$ are formed likewise in these three systems. In the case of pyridine the compound $\text{SnCl}_4 \cdot 2\text{C}_5\text{H}_5\text{N}$ was also formed. On the thermal decomposition of these compounds the acetic acid is displaced from the inner sphere of the complex, and compounds of the type $\text{SnCl}_4 \cdot 2\text{C}_5\text{H}_5\text{N}$ are formed. A diagram shows the special apparatus for carrying out the potentiometric titrations, in which the cryoscopic titrations were undertaken. N. I. Usanovich and Ye. I. Kalashnikovskaya (Ref. 6) are mentioned. There are 13 figures and 8 Soviet references.

ASSOCIATION: Institut Khimii Akademi nauk Kazakhskoy SSR (Institute of Chemistry of the Academy of Sciences of the Kazakh SSR)

SUBMITTED: March 12, 1959

Card 2/2

1593* Zircon-Mullite Refractories. (In Russian) A. A. Lityakovskiy, Steklo i Keramika (Glass and Ceramics), v. 7, Sept. 1950, p. 6-9.

The possibility of obtaining a high-melting refractory for the lining of tank furnaces by introducing zirconia into mullite was investigated. Optimum composition was found to be: 22.7% SiO₂, 2.11% TiO₂, 7.72% ZrO₂, 60.67% Al₂O₃, 0.30% Fe₂O₃, 0.47% CaO, and traces of MgO.

1593* Zircon-Mullite Refractories. (In Russian) A. A. Lityakovskiy, Steklo i Keramika (Glass and Ceramics), v. 7, Sept. 1950, p. 6-9.

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1593* Zircon-Mullite Refractories. (In Russian) A. A. Lityakovskiy, Steklo i Keramika (Glass and Ceramics), v. 7, Sept. 1950, p. 6-9.

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S/032/61/027/003/008/025
B101/B203

AUTHORS: Markosov, P. I., Zaychenko, V. N., and Lityayeva, Z. A.
TITLE: Determination of carbon monoxide microimpurities in ethylene
PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 3, 1961, 285-287

TEXT: Industrial concentrated ethylene should not contain more than one-thousandth percent parts of carbon monoxide. A chromatographic method was developed to determine CO in C_2H_4 . The Soviet XT-2M (KhT-2M) chromathermograph is used. 0.1-0.5 l of the gas to be analyzed are adsorbed on AP-3 (AR-3) activated carbon. Fractional desorption of components by the passing-through of air follows. The easily volatile impurities are separated out without heating. In the chromatogram, the CO appears between H_2 and CH_4 . After the separation of CH_4 , the chromatographic column is heated to desorb C_2H_4 and C_2H_6 . Fig. 1 shows chromatograms, Fig. 2 the calibration curve plotted by means of samples with added known CO content. 150 ml of the gas to be analyzed is passed through 19 g of activated carbon at a rate
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Determination of ...

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of 4-5 ml/min. 15 min after the passage of gas, air is sent through at a rate of 50 ml/min. The analysis becomes more accurate by passing 350 ml of gas (instead of 150 ml) through the chromatographic column. The areas of the CO peaks are proportional to the CO content. Under constant desorption conditions, the quantitative determination of impurities may simply be done according to the height of peaks. There are 2 figures and 1 table.

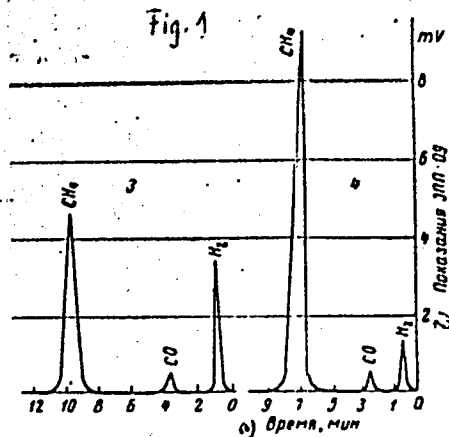
ASSOCIATION: Krasnodarskiy filial Vsesoyuznogo nauchno-issledovatel'skogo neftegazovogo instituta (Krasnodar Branch of the All-Union Scientific Research Institute of Petroleum and Gas)

Card 2/4

Determination of ...

Legend to Fig. 1: Chromatograms of ethylene with different contents of carbon monoxide. 3) 0.004% CO, gas volume 150 ml; 4) 0.002% CO, gas volume 350 ml; a) time, min; b) indication of the ЭПН-09 (EPP-09) recorder.

S/032/61/027/003/008/025
B101/B203

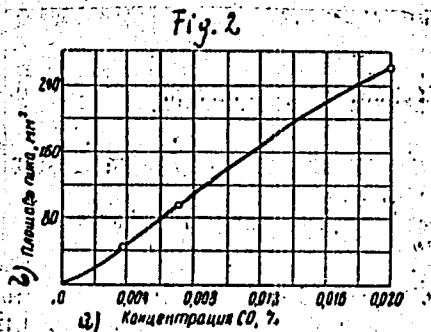


Card 3/4

Determination of ...

S/032/61/027/003/008/025
B101/B203

Legend to Fig. 2: Calibration curve.
a) Concentration; b) peak area, mm².



Card 4/4

ZAYCHENKO, V.N.; LITYAYEVA, Z.A.; MARKOSOV, P.I.

Chromatographic determination of microimpurities of carbon monoxide, methane, and acetylene in ethylene used for the production of polyethylene. Azorb.khim.zhur. no.6:127-135 '61. (MIRA 15:5)
(Ethylene) (Polyethylene)

LITYAYEVA, Z.A.; MALKOSOV, P.I.; ZAYCHENKO, V.N.

Chromatographic determination of carbon monoxide, methane,
and acetylene in high-purity ethylene. Trudy KF VNIi no.8;
110-124 '62. (MIRA 17:5)

LITYAYEVA, Z.A.

Separation of individual hydrocarbons by the preparative chromatography method. Gaz. delo no.1:27-29 '65.

(MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov, Krasnodar.

LITYKHIN, G.

Albanian firemen in Saratov. Pozh.delo 6 no.12:31 D '60.
(MIRA 13:12)

1. Nachal'nik pozharno-ispytatel'noy stantsii Upravleniya pozharnoy
okhrany, Saratov.
(Saratov--Fire prevention--Study and teaching)

LITNETSKIY, I.B. [Litnets'kiy, I.B.], kand.tekhn.nauk, dots.

Miniature radio and electronic equipment. Hauka i zhyttia 10
no.8:19-21 Ag '60. (MIRA 13:8)

1. L'vovskiy politekhnicheskii institut.
(Radio--Equipment and supplies)
(Electronic apparatus and appliances)

Lil / 1957, Jadwiga
SZWARNOWIECKA, Izabella; LITYNSKA, Jadwiga

Operative treatment of severe scoliosis by reconstructive procedures. Chir. narz. ruchu. 22 no.3:287-289 1957.

1. Z Kliniki Ortopedycznej A. M. W Warszawie. Kierownik: prof. A. Gruca.

(SCOLIOSIS, surg.

reconstruction technics in severe scoliosis (Pol))

GORZYNSKI, T.; ~~WITYNSKA~~, J.

Synovitis, tenosynovitis and bursitis villonodosa pigmentosa chronica.
Chir. narz. ruchu 23 no.3:275-280 1958.

1. Z Kliniki Ortopedycznej A. M. w Warszawie Kierownik: prof dr A Grucza
Adres autrow: Warszawa, ul Lindleya 4, Klinika Ortopedyczna A.M.

(GIANT CELL TUMOR,

heel tendon, histol. similarities with knee synovial
hypertrophic lesions (Pol))

(KNEE, diseases,

synovial hypertrophic lesions, histol. similarities with
giant-cell xanthoma of heel (Pol))

(HEEL, neoplasms,

giant-cell xanthoma, histol. similarities with synovial
hypertrophic lesions of knee (Pol))

GORŃSKI, Tomasz; LITYŃSKA, Jadwiga

Myositis ossificans progressive, Minchmeyer's disease. Chir. narz. ruchu
23 no.4:343-351 1958.

1. Z Kliniki Ortopedycznej A. M. w Warszawie Kierownik: prof. dr A. Grucza.
Adres autorow: Warszawa, ul. Lindleya 4, Klinika Ortopedyczna A. M.
(MYOSITIS OSSIFICANS, case reports,
progr. (Pol))

LITYNSKA, Jadwiga

Results of the treatment of synovial tuberculosis of the knee by means of synovectomy. Chir.narz.ruchu 25 no.2:145-148 '60.

1. Z Kliniki Ortopedycznej A.M. w Warszawie. Kierownik: prof.dr. A. Gruca.

(TUBERCULOSIS OSTEOARTICULAR surg.)

BIALECKI, Stanislaw; MITROZEWSKA, Honorata; LITYNSKA, Jadwiga; JEDRZEJEWSKA,
Halina

Complication of intra-articular unions in fractures of the knee and
ankle joints. Chir.narz.ruchu ortop. polska 27 no.1:49-53 '62.

1. Z Kliniki Ortopedycznej AM w Warszawie Kierownik: prof. dr
A.Gruca.

(KNEE fract & disloc) (ANKLE fract & disloc)

LITVINSKA, -adwiga

Surgical treatment of a case of congenital dislocation of the pelvis.
Chir. narzad. ruska ortop. vol. 25 no.3:383-387 1961.

1. Z Kliniki Ortopedycznej Akademii Medycznej w Warszawie (Kierownik:
prof. dr. med. A. Grucal).

LITYNSKI, A

POLAND/Cultivated Plants. Commercial. Oil-Bearing. Sugars.

M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20410.

Author : A. Litynskiy

Inst : No given

Title : The Most Important Achievements in the Selection of Oil-Bearing Crops in Poland During the Post-War Years.
(Vazhneyshiye dostizheniya selektsii maslichnykh kul'tur v pol'she v poslevoyennyye gody.)

Orig Pub: Zesz. probl. "Kosmosu", 1955, No 1, 78-116.

Abstract: Four fifths of the area in Poland taken up by oil crops is sown with *Brassica napus oleifera* and *B. rapa oleifera* var. DS (chiefly their winter forms). The oil content in the seeds of these plants attains 45-42%. Besides these, some 20 other oil-bearing crops are cultivated and new plants are being introduced into cultivation which grow

Card : 1/2

LITYNSKI, Adam; URBANIAK, Zb. Zenon

Influence of heating on the vitality of three-year-old seeds of common bird's foot-trefoil (*Lotus corniculatus* L.) examined immediately and at various intervals thereafter. *Rocz nauk roln* rosl 88 no.1:91-105 '63.

1. Zaklad Podstaw Rolnictwa, Politechnika, Warszawa.

LITYNSKI, Adam

Major achievements of Polish oil plant breeding during the recent twenty-year period. Postepy nauk roln 11 no.4:3-10 J1-Ag 864.

1. Institute of Basic Problems of Agriculture, Technical University, Warsaw.

LITYNSKI, Marian; JAROCKA, Mirosława

Bases and method of elaborating prospective development plans
for vegetable farming. Prace przyrod roln Szczecin 12 no.3:
1-64 '62.

LITYNSKI M. Warszawa, ul. Gornoslaska 10, m 10. Nadcisnienie tetnicze wywołane guzami korowo-nadnerczowymi On the practical value of phonocardiography in the diagnosis of heart diseases. 11. Polsk. Tyg. lek. 1953, 8/6 (204-206)

SO: EXCERPTA MEDICA, Vol. 8 No. 2, Section VI, February 1954

LITYNSKI, Michal.

Amyloidosis. Polski tygod. lek. 10 no.51:1655-1657 19 Dec 55.

1. Z Oddzialu Chorob Wewnetrznych Sanatorium im. F.Dziersynskiego
w Otwocku; Ordynator: dr. med. M.Litynski.

(AMYLOIDOSIS

review (Pol))

LITYNSKI, Michal

~~_____~~
Amyloidosis. Polski tygod. lek. 10 no.52:1682-1684 27 Dec 55.

1. Otwock, Sanatorium F. Dzierzynskiego, Oddz. Chor. Wewn.
(Dokonczenie).

(AMYLOIDOSIS,
review. (Pol))

LITYNSKI, Michal; BULSKA, Malgorzata

Acute myeloid leukemia in labor. Polski tygod. lek. 11 no.
7:306-310 13 Feb 56.

1. Z Oddzialow: Polozniczo-Ginekol. kier. prof. dr. M. Bulska
Wewn. kier. prof. dr. A. Landau i prof. dr. B. Wisniewski; Inst.
Grzylcy; dyrektor prof. dr. J. Misiewicz i Inst. Doskonalenia i
Specj. Kadr Lek.; dyrektor prof. dr. W. Hartwig Warszawa, ul.
Gornoslaska 16.

(LEUKEMIA, MYELOCYTIC,
postpartum, case report. (Pol))

(PNEUMPHRIUM, complications,
Leukemia, myelocytic, postpartum onset of symptoms.
(Pol))

LITYNSKI, Michal (Warszawa, ul. Gornoslaska 16 m 16)

Effect of N1-sulfanilylo-N2-n-butylcarbamide in diabetes complicated by tuberculosis. Polski tygod. lek. 12 no.23:880-884 3 June 57.

1. Z III Zakladu Chorob Wewnetrznych Instytutu Doskonalenia i Specjalizacji Kadr Lekarskich w Warszawie; kierownik: prof. dr. A. Goldschmied i z Oddzialu Wewnetrznego Sanatorium im. F. Dziersynskiego w Otwocku; ordynator: dr. med. M. Litynski.

(TUBERCULOSIS, PULMONARY, complications,

diabetes mellitus, BZ-55 ther. (Pol))

(ANTIDIABETES, therapeutic use,

BZ 55 in diabetes compl. by pulm. tuberc. (Pol))

LITYNSKI, Michal (Warszawa, ul. Gornoslaska 16 m 16.)

Value of the insulin-glucose test for qualifying diabetic patients for treatment with sulfonylurea preparations. Polski tygod. lek. 13 no.33: 1272-1276 18 Aug 58.

1. (Z III Zakladu Chorob Wewnetrznych Instytutu Doskonalenia i Specjalizacji Kadr Lekarskich w Warszawie; kierownik: prof. dr med. A. Goldschmied).

(ANTIDIABETICS, ther. use

sulfonylureas, patient selection by Himsworth insulin-glucose test (Pol))

(INSULIN

Himsworth insulin-glucose test in selection of diabetics for sulfonylurea ther. (Pol))

(GLUCOSE

same)

CZALBOWSKA, Irena; DEKA, Zenon; LITYNSKI, Michal; MOSKWA, Jerzy

Analysis of cases of bone fracture and of their effect on the course of organic changes leading to fatal outcome in patients over 50 years of age. Chir.narz.ruchu ortop.polska 24 no.6:485-494 '59.

1. Z Miejskiego Szpitala Chirurgii Urazowej w Warszawie ul. Jotejki 9/11. Dyrektor: dr Z. Deka.
(FRACTURES)

LITYNSKI, Michal

On evaluation of the determination of phospholipids in protein fractions separated by the salting-out method. Pol. arch. med. wewn. 33 no.6:649-657 '63.

1. Z III Kliniki Chorob Wewnętrznych AM w Warszawie Kierownik:
prof. dr med. E. Kodejszko.
(PHOSPHOLIPIDS) (BLOOD LIPIDS) (BLOOD PROTEINS)

LITYNSKI, Michal

Behavior of phospholipids in protein fractions separated by
the salting out method in arteriosclerotic patients. Pol.
arch. med. wewn. 33 no.7:775-781 '63.

1. Z III Kliniki Chorob Wewnetrznych AM w Warszawie Kierownik:
prof. dr med. E. Kodejszko.
 (ARTERIOSCLEROSIS) (PHOSPHOLIPIDS)
 (BLOOD PROTEINS) (BLOOD CHEMICAL ANALYSIS)

LITYNSKI, Michal

Behavior of phospholipids in protein fractions isolated by the salting-out method in diabetes complicated by angiopathies and neuropathies. Pol. arch. med. wewnet. 33 no.8: 895-902 '63.

1. Z III Kliniki Chorob Wewnetrznych AM w Warszawie Kierownik:
prof. dr med. E. Kodejszko.

(BLOOD PROTEINS) (PHOSPHOLIPIDS)
(BLOOD CHEMICAL ANALYSIS)
(DIABETIC ANGIOPATHIES)
(DIABETIC NEUROPATHIES)

15

LEITYNSKI, M.

CA

The fertilizer needs of the soils of the southeastern districts (Poland). MARIAN
LEITYNSKI. Roczniki Nauk Rolniczych i Leśnych 24, 90-128(1930).--The reaction to
 P₂O₅, K₂O, and N is given for various soils: sandy, loess, black earth, aluvial, loam,
 lime and moorland of southeastern Poland. The crops raised were winter rye, winter
 and summer wheat, oats, summer barley, potatoes and sugar beets. J. B. H.

AND-SEA METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

DATE

15

LITYNSKI, M.
URBANIAK, Z.

"The Significance of Evaluating the Properties of Natural Fermented Beet Extract in the Breeding of Red Beets." p. 177, (ROCZNIKI NAUK ROLNICZYCH. SERIA A-ROSLINNA, Vol. 66, no. 2, 1953, Warsaw, Poland).

SO: Monthly List of East European Accession, Lib of Congress, Vol 2, no 10 Oct. 1953, Uncl.

LITYNSKI, M.

POL. 19

Application of infra-red rays in combating bruchids. M. Litynski and A. Wilkosc (*Isery. Nauk. rol.*, 1954, 80, A, 613-630). Complete control of *Bruchus pisorum* on seed peas is obtained by exposure of the peas in single rows for 3 min. to i.r. rays from 20-w. lamps at a distance of 25-30 cm. Other proposed methods, including keeping the peas at 25° or at -5° are ineffective. Avoidance of delay between harvesting, threshing, and irradiation should eradicate the pests within a few years. P. S. Anup.

LITYNSKI, M.

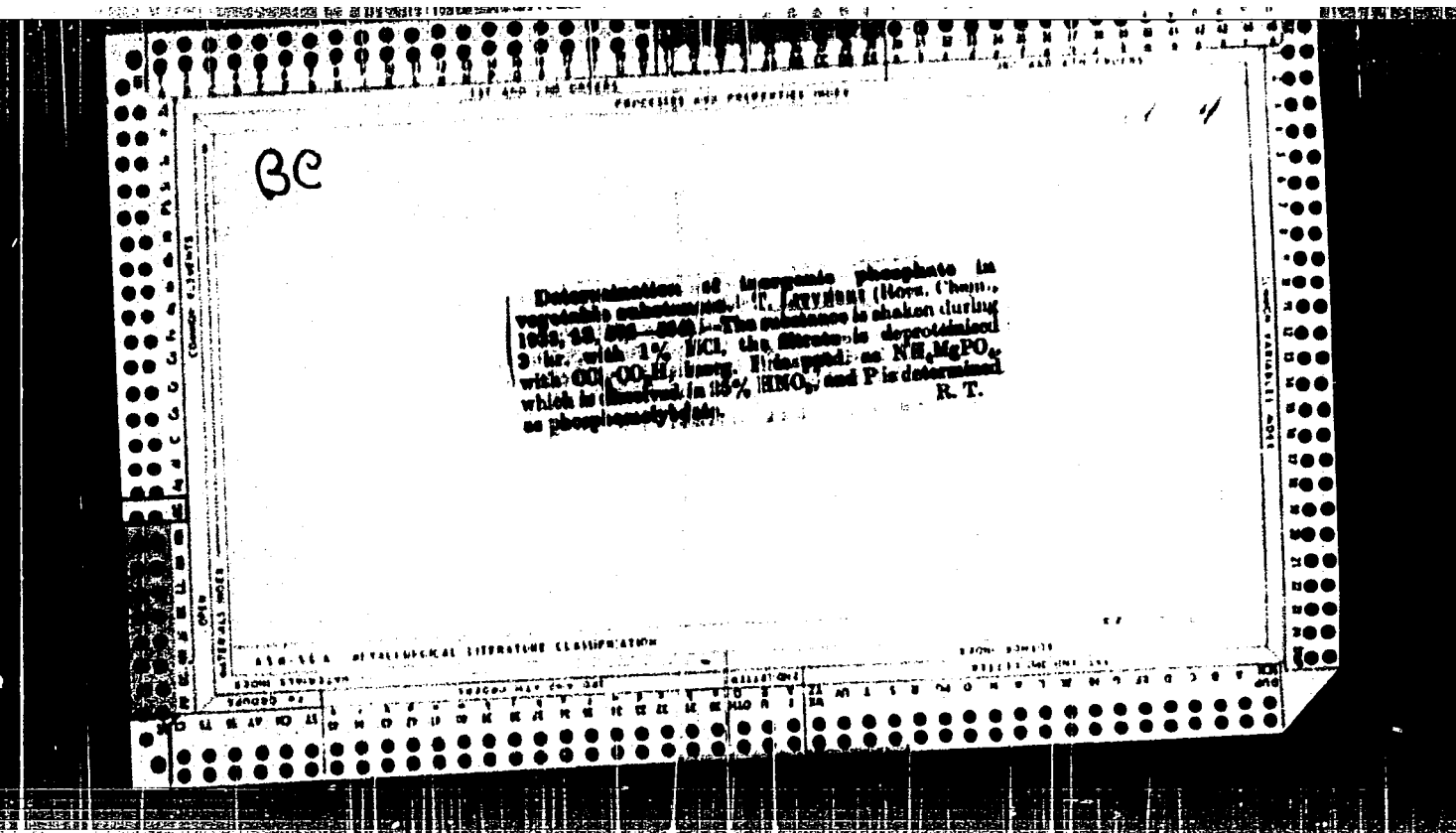
ed. Warzywnictwo. Warszawa, Panstwowe Wydawn. Rolnicze i Lesne, 1955.

P.1116 (Vegetable gardening)

DA

Not in DLC

SO: Monthly Index of European Accessions (AEEI) Vol. 6, No.11, November 1957



7

Remarks on the R. C. Collison method for extracting phosphorus from vegetable matter. *Indust. Lab. Anal.* *Anal. Chem.* 18, 43 (1935). The Collison (U. S. 2,343,333) method for detg. the amt. of mineral P in plants depends on: (1) extg. the substance, first with abs. alc. and then with a 0.2% HCl in 96% alc.; (2) pptg. the inorg. P in the second ext. with NH_4I ; (3) detg. the P by one of the usual analytical methods. The results obtained in this way are lower than those obtained by the direct treatment of the plant substance with 1% HCl and a subsequent sepn. of the P from the inositol phosphoric acid compds.; first by magnesia mixt. and secondly by the molybdate reagent at room temp. This difference is due to the fact that 0.2% HCl in 96% alc. is not sufficient to ext. the total amt. of inorg. P compds. The expts. were carried out on the vegetative parts of oats during their blossoming period and also on flour made from ripe oats.

J. F. Matczek

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

15

1ST AND 2ND ORDERS

PROCESSED AND PROPERTY MARK

The injurious effect of extra large applications of phosphorus on oats. *Tadeusz Litvinil, Polish Agr. Forestal Ann. 34, 233-81 (in English 251-3) (1935).*— The plants which received large applications of P (10 g. and 0.35 g. P_2O_5 for each pot in the form of $\text{CaH}_2\text{P}_2\text{O}_7$, $\text{NiH}_2\text{P}_2\text{O}_7$, and $(\text{NiH}_2)_2\text{P}_2\text{O}_7$) assimilated a much greater amt. of P than the control plants. Only a small portion of P taken up by plants was converted into org. P compds. The greater portion was taken up by the plant in the cell sap in the inorg. form. No difference in protein and non-protein N compds. was found in the 2 series, and none in the mineral content. The results obtained by analysis of the mineral components led to the base-acid ratio 2:1 in plants receiving normal amts. of P, while the ratio was 2:2 in those which received excessive amts. of P. L. attributes the physiol. disturbance of plants receiving an excess of P to the increased acidity of the cell juices without any increase of the acidity of the soil. J. K.

COMMON ELEMENTS

INTERNAL MARKS

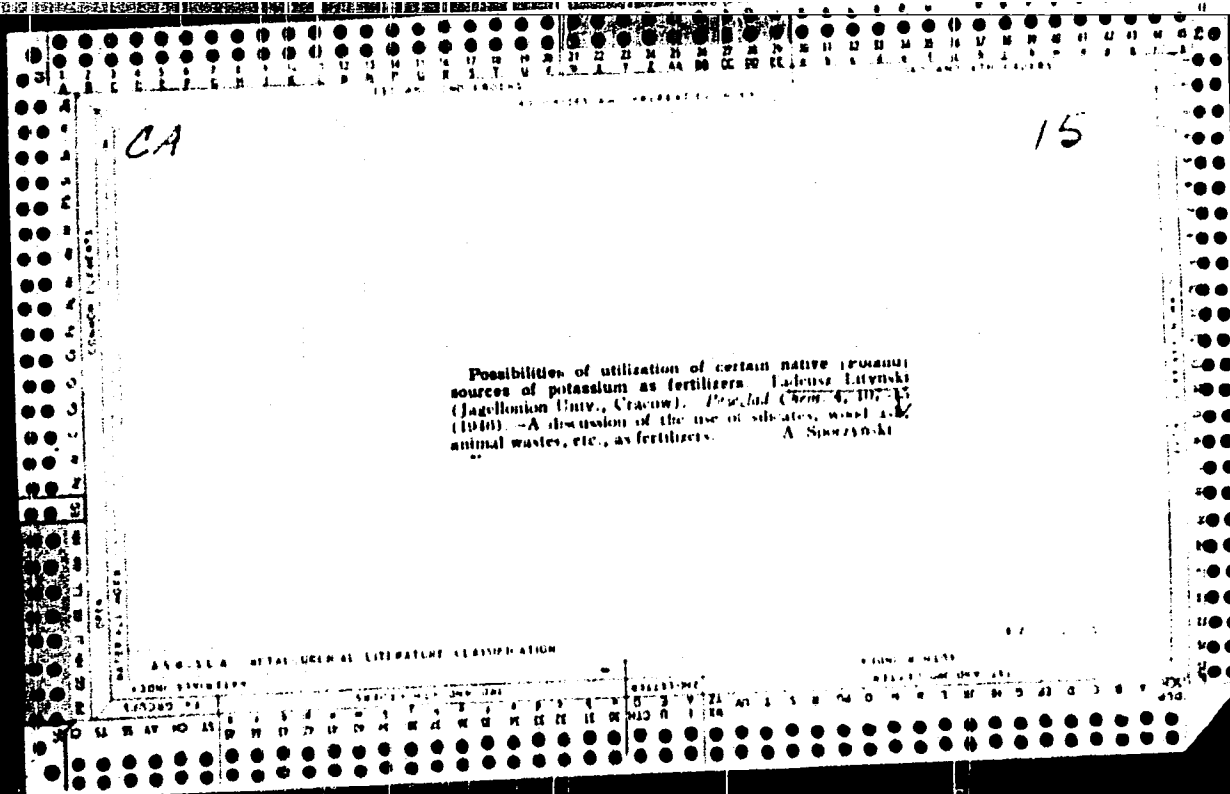
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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STANDARD INFORMATION REPORT	
FORM NO. 1-62 (REVISED)	
1ST AND 2ND EDITIONS	
PROCEDURES AND PROPERTIES INDEX	
B C	Determination of nucleic phosphorus in horse-beans (<i>Vicia faba minor</i>). T. LUKNAR (Bull. Acad. Polonaise, 1936, B, 103-125).—Extraction of horse-beans with 100 times their wt. of 0.1% aq. NaOH, followed by pptn. of the nucleic compounds (I) with HCl (to make 3-4%), enables the nucleic compound P and the total I to be determined. Variations from this procedure result in incomplete extraction, adsorption of other I ^p compounds on the ppt., or decomp. of the (I). The total P, as P ₂ O ₅ , extracted by NaOH represents about 1.35% of the bean, and includes 0-15% of nucleic P and 0-16% of inorg. P.
F.A.A.	A - 4
ASSOCIATE METALLURGICAL LITERATURE CLASSIFICATION	
SOURCE SYMBOL	CITATION
10-0000 SA	MAY 1936
RESEARCH ORIGINATOR'S NAME	
FACILITY ONE UNIT TWO	



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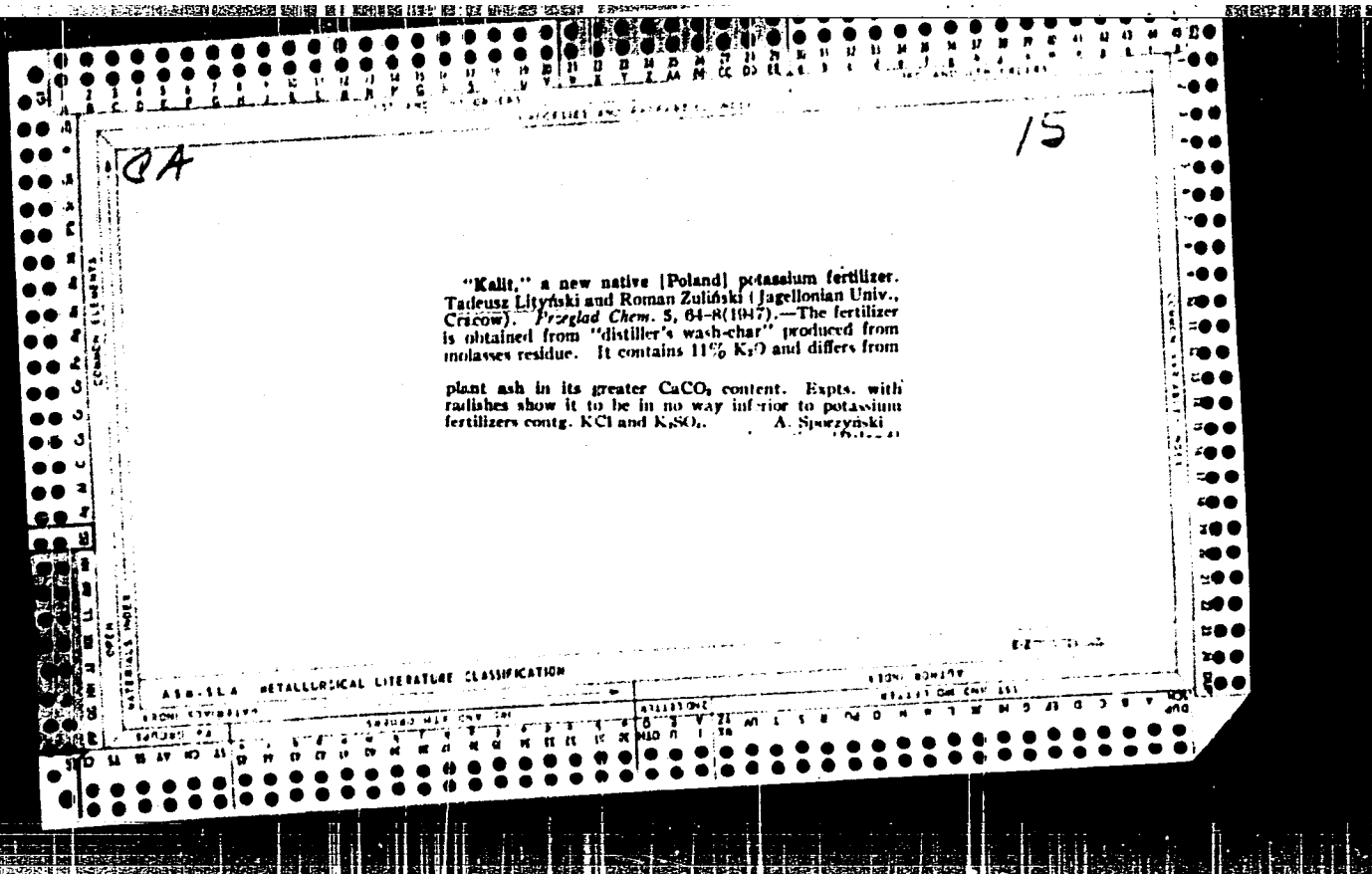
The solubility of phosphorus compounds from yeast
Leucobryopsis (Univ. Jagiellonski, Krakow, Poland).
Polish Acad. Sci. Bull. Ser. B 11: 11 pp. (1946). Ratio of P compounds
Perest. 72A, No. 1, 11 pp. (1946). Ratio of P compounds
 from yeast was studied by using various amounts of acids
 and bases. The inorg. phosphate (equal 1/3 of total) can
 be best removed with 0.001% NaOH. The hexose phos-
 phates (20% of total) form stable complexes with pro-
 teins at pH 4.5 and 2.70, and therefore should be ext-
 racted with 0.01% HCl. Nucleic acids (1% of total phosphate)
 are completely removed after a 1% ac. extn. with 0.2%
 NaOH, with a ratio of yeast to extractant of 1:100. Sub-
 sequent acidification with HCl to pH 3.95 ppt. the total
 nucleic acid. J. Z. Roberts

C.A.

15

4

The influence of multiple mineral fertilizer on the pH of soil. Tadeusz Lityński and Roman Zuliński (Dept. Agr. Chem. Jagiellonian Univ., Cracow, Poland). *Polska Akad. Umiejętności, Rozprawy Wydziału Mat.-Przyrod. 72A*, No. 3, 3-9 (in English, 10-11) (1948) (Pub. 1948). Some plots received NH_4NO_3 , $\text{CaH}_2(\text{PO}_4)_2$, and K_2SO_4 , others only 2 of these salts; control plots were run with no addn. of fertilizers. Some plots were limed, in others lime was omitted. pH detns. of various soil samples showed that the most acid reaction was exhibited by unlimed soils which had received all 3 salts; second were limed plots with addn. of N and K, then those limed and receiving N and P, then those limed plus all three minerals, and last the limed ones with addn. of P and K only.
A. H. Koffler



CA

15

Determination of the hydrolytic acidity of soils. T. Litvinski and P. Zimny (Univ. Jagiellonski, Krakow, Poland). *Polish Abad. i miernictwa, Rozprawy Hydrol. i Mel.-Przyrod.* 73A, No. 3, 13 pp.(1947). - The methods employed at present give too much variation in the values obtained owing to the use of both Na and Ca acetates, the use of insufficient vol. of the extractant and the detn. of the titration end point by means of indicators. The suggested method is based on the extrn. of 10g. sample with 100 cc. 1. N Ca(OAc)₂ and an electrometric titration of the filtered soln. to pH 7.8, with 0.1 N NaOH. I. Z. R.

Br Ads

*C-3 Oxyanion etc.
(agreement)*

1279. Electrometrical method for determination of lime requirement of soils. M. M. T. Litynski and F. Zimny (*C. R. Acad. Sci. Paris, 1948, 7, 8*).--H ions in the soil may be bound to the "kernel" of the colloidal soil particle by secondary valencies etc. or to the "macro-ion" by static electricity. The latter are most easily exchanged for Ca. With 5 g. of soil in 100 c.c. N. Ca acetate titration with 0.1-N-NaOH gives a measure of the total of the two groups of H ions. If greater quantities of soil are used, only the H ions of the outer layer are exchanged for Ca. L. G. G. WAUGH.

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CA

Electrometrical method for the determination of the lime requirement of the soil. T. Lityński and F. Zimny. *Bull. intern. acad. polon. sci. (Classe sci. math. nat. Ser. A, 1948, 24:31m English)*. A direct titration with NaOH of the soil suspension in acetate is used to det. the lime requirement. The cc. of NaOH used for 10 g. of soil depends upon the diln. When more than 5 g. of soil is placed in 100 cc. of 1 N Ca acetate a const. titration per 10 g. of soil is obtained with 0.1 N NaOH. When less than 5 g. per 100 cc. is used the titration value decreases. In an acidified soil H ions exist in the inner and outer swarm around the soil micelle. At high soil-soln. ratios the H ions from the outer layer are replaced by the Ca ions. At lower soil-soln. ratios besides an exchange of the outer ions, an exchange of the ions from the inner layer also takes place. Since the exchangeable H ions in the outer layer of the micelle d.t. the degree of acidification of the soil, the measure of the hydrolytic acidity of the soil which the authors accept is the amt. in cc. of 1 N NaOH which is used during the titration of the suspension of the soil in Ca acetate with the NaOH, at a ratio of 5 g. of the soil per 100 cc. of acetate. A great deal of conformity was found between the pH value of soil suspensions in 1 N KCl and the amt. of lime dosed and necessary to remove the complete hydrolytic acidity of the soil.

Maurice Fried

ASR-55A METALLURGICAL LITERATURE CLASSIFICATION

CLASS	SUBCLASS	NUMBER	DATE	AUTHOR	TITLE	ABSTRACT	NOTES
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83	83	83	83	83	83	83	83
84	84	84	84	84	84	84	84
85	85	85	85	85	85	85	85
86	86	86	86	86	86	86	86
87	87	87	87	87	87	87	87
88	88	88	88	88	88	88	88
89	89	89	89	89	89	89	89
90	90	90	90	90	90	90	90
91	91	91	91	91	91	91	91
92	92	92	92	92	92	92	92
93	93	93	93	93	93	93	93
94	94	94	94	94	94	94	94
95	95	95	95	95	95	95	95
96	96	96	96	96	96	96	96
97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100

CA

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**Prof. Władysław Vorobczi. Tadeusz Lityński. —Raz-
nik Chem. 21, 197-208(1948).—Obituary and portrait.
H. H. Simant**

ASAC-ILA METALLURGICAL LITERATURE CLASSIFICATION

EDSON SYMBOL
CLASSIFY ON ONE SIDE

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CLASSIFY ON ONE SIDE